

REMARKS/ARGUMENTS

Claims 2 and 5-6 are canceled; Claims 19-21 are new.

Support for each new and amended claim is found at the originally filed claims and throughout the originally filed specification. Additionally, support for new Claims 19-20 is found, for example, at Claim 10; and support for new Claim 21 is found, for example, at Claim 14.

No new matter is added.

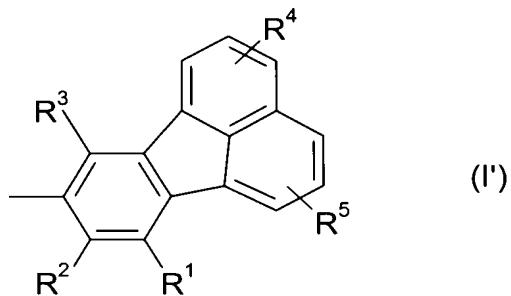
The objection to Claim 12 is obviated by the amendment of Claim 12 to depend from Claim 3. Withdrawal of the objection is respectfully requested.

The indefiniteness rejection of Claims 1-4 and 7-18 is obviated by the amendment of Claims 1 and 7 to describe that “n is 2 or 3 or, where X is an oligophenyl group, n is from 1 to 20.” Withdrawal of the indefiniteness rejection is respectfully requested.

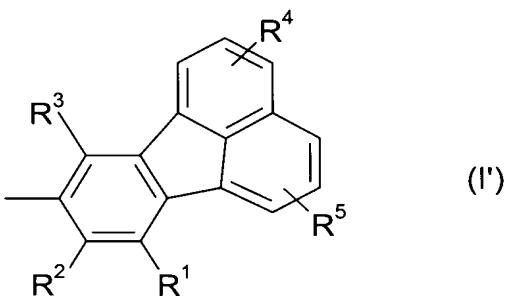
The objection to the specification is obviated by submission, along with this paper, of a substitute Abstract. Withdrawal of the specification objection is respectfully requested.

The anticipation rejection of Claims 1, 3-4, 7-13, 14-15, and 17 as being unpatentable in view of Tagami is respectfully traversed because the fluoranthene derivatives of Tagami require substitution with an amine or alkenyl group, but the fluoranthenes of present Claims 1 and 7, and the claims depending therefrom, are not substituted with an amine or alkenyl group.

Present Claim 1 is drawn a fluoroanthene that is substituted by R¹, R², R³, R⁴, R⁵ and X. R⁴ and R⁵ are each hydrogen; at least one of the radicals R¹, R² and/or R³ is not hydrogen; R¹, R², and R³ are each independently selected from hydrogen, alkyl, an aromatic radical, a fused aromatic ring system, or a heteroaromatic radical; and X is an alkyl radical, an oligophenyl group, or a radical of the formula (I') (where R¹-R³ and X are not at the same time phenyl):



Present Claim 7 is drawn to an organic light-emitting diode comprising, as an emitter molecule, a fluoranthene that is substituted by R^1 , R^2 , R^3 , R^4 , R^5 and X ; R^4 and R^5 are each hydrogen; at least one of the radicals R^1 , R^2 and/or R^3 is not hydrogen; R^1 , R^2 , and R^3 are each independently selected from hydrogen, alkyl, an aromatic radical, a fused aromatic ring system, or a heteroaromatic radical; and X is an alkyl radical, an oligophenyl group, or a radical of the formula (I')

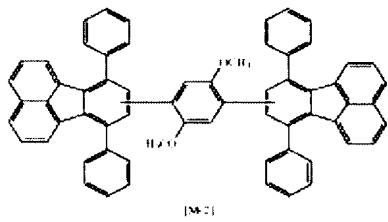


None of the substituents in present Claim 1 and 7, and the claims depending therefrom, is an amine group or an alkenyl group.

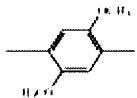
In contrast to present Claim 1 and 7, Tagami is drawn to an organic electroluminescence device that comprises an organic layer disposed between at least one pair of electrodes, wherein the organic layer comprises a compound having a fluoranthene skeleton structure substituted with at least an amine group or an alkenyl group (see the Abstract of Tagami). Because the fluoranthene of Tagami requires an amine group or alkenyl

group substituent, and, because the fluoranthene of present Claim 1 and the fluoranthene in the organic light-emitting diode of present Claim 7 do not contain amine group or alkenyl group substituents, Tagami cannot anticipate or render obvious present Claims 1 and 7 and the claims depending therefrom. Withdrawal of the anticipation rejection is respectfully requested.

The anticipation rejection of Claims 1-4, 7-9 and 11-13 as being unpatentable in view of Cho is respectfully traversed. As described above, Claim 1 is drawn to an emitter molecule that is a substituted fluoranthene and Claim 7 is drawn to an organic light-emitting diode comprising, as an emitter molecule, a substituted fluoranthene. Cho is drawn to a compound derived from cyclopentadienone (see the Abstract of Cho). The key feature of the compounds of Cho is an Ar-bridge between two cyclopentadienone derived residues. One example of a compound of Cho is found at Example 2, page 5, paragraph 42:



. This compound clearly shows an Ar-bridge:



The substituted fluoranthenes of present Claim 1 and present Claim 7 (in present Claim 7, a diode, contains, as an emitter molecule, a substituted fluoranthene) do not contain the Ar-bridge of Cho. Accordingly, Cho cannot anticipate or render obvious present Claims 1 and 7 and the claims depending therefrom. Withdrawal of the anticipation rejection is respectfully requested.

The obviousness rejection of Claims 1-4, 7-15 and 17 as being unpatentable in view of Hosokawa is respectfully traversed because because Hosokawa does not describe or suggest the fluoranthene of present Claim 1 and the fluoranthene found in the diode of present Claim 7.

In Hosokawa, a hydrocarbon compound and an electroluminescence element are disclosed, wherein the electroluminescence element has high heat resistance (see paragraph 1 of Hosokawa). The hydrocarbon compounds of Hosokawa comprise an aryl structure combined with a fluoranthene structure: Xn-Ar₁ (see paragraph 5 of Hosokawa). Ar₁ can be an aromatic group, a diarylamino-substituted aromatic group or a heterocyclic group and X has a fluoranthene structure and n is from 2 to 4 (see paragraph 5 of Hosokawa). Examples of suitable compounds are compounds (A1) to (A24) found in paragraphs 11-15 of Hosokawa. All of the compounds described in Hosokawa comprise fluoranthenes substituted at positions equivalent to R⁴ and R⁵ of the fluoranthenes present Claims 1 and 7, by groups that are not hydrogen. By comparison, in the fluoranthenes of present Claims 1 and 7, R⁴ and R⁵ are each hydrogen. Thus, Hosokawa does not describe or suggest the fluoranthenes of present Claim 1 and included in the diode of present Claim 7, wherein R⁴ and R⁵ are hydrogen. Withdrawal of the obviousness rejection is respectfully requested.

The obviousness rejection of Claims 10, 14, 16 and 18 as being unpatentable in view of Hosokawa and Nishi is respectfully traversed. Present Claims 10, 14, 16 and 18 depend either directly or indirectly from present Claim 1 or from present Claim 7. As described above, Hosokawa does not describe or suggest the fluoranthenes of present Claims 1 or 7. Accordingly, Hosokawa cannot render obvious the claims depending from present Claim 1 or 7, (e.g., present Claims 10, 14, 16 and 18). Nishi, whom the Office relies upon to provide

mobile visual display units, does not remedy the deficiency of Hosokawa. Withdrawal of the obviousness rejection is respectfully requested.

The obviousness rejection of Claims 10, 14, 16 and 18 as being unpatentable in view of Tagami and Nishi is respectfully traversed. Present Claims 10, 14, 16 and 18 depend either directly or indirectly from present Claims 1 or 7. As described above, the fluoranthene of Tagami requires an amine group or alkenyl group substituent, and, the fluoranthenes of present Claims 1 or 7 do not contain amine group or alkenyl group. Accordingly, Tagami cannot anticipate or render obvious present Claims 10, 14, 16 and 18. Nishi, whom the Office relies upon to provide mobile visual display units, does not remedy the deficiency of Tagami. Withdrawal of the obviousness rejection is respectfully requested.

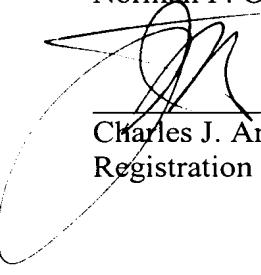
The obviousness rejection of Claims 10 and 14-18 as being unpatentable in view of Cho and Nishi is respectfully traversed. Present Claims 10 and 14-18 depend either directly or indirectly from present Claims 1 or 7. As described above, Cho is drawn to a compound derived from cyclopentadienone. The key feature of the compounds of Cho is an Ar-bridge between two cyclopentadienone derived residues. The substituted fluoranthenes of present Claim 1 and present Claim 7 (in present Claim 7, a diode, contains, as an emitter molecule, a substituted fluoranthene) do not contain the Ar-bridge of Cho. Accordingly, Cho cannot anticipate or render obvious present Claims 1 and 7 and the claims depending therefrom. Nishi, whom the Office relies upon to provide mobile visual display units, does not remedy the deficiency of Cho. Withdrawal of the anticipation rejection is respectfully requested.

Applicants submit the present application is now in condition for allowance. Early notification to this effect is earnestly solicited.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.

Norman F. Oblon


JEFF MINTYRE
Reg. No. 36867

Charles J. Andres, Jr., Ph.D.
Registration No. 57,537

Customer Number
22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 08/07)